

NOUR ASHOUSH

Master of Engineering, Computer Science and Software Engineering

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EDUCATION

University of Birmingham

MEng in Computer Science and Software Engineering

- Student Representative (2023–2025)
- Equipment Officer, Virtual Reality Society (2024–2025)

2021–2025

First-Class Honours

GPA: 4.25

Top 2% of ~250 students

EXPERIENCE

Software Engineering Intern | Irvine Systems | Tokyo, Japan

Aug 2025 – Present

- Completed a month-long internship in Tokyo, contributing within a flat-hierarchy team through daily Scrum stand-ups and collaborative peer reviews while adapting quickly to Japanese work culture.
- Designed and demoed a Swift iOS MVP (“Rally-Ho”) to help Japanese learners practice English L/R sounds and currently leading its continued design and implementation remotely.
- Supporting an AI initiative using Mistral LLM for a bookstore chain’s database management system, assisting with fine-tuning, prompt testing, and model evaluation.

Front-End Developer Intern | LyncFit | Remote, UK

Jun 2025

- Led the end-to-end development of the admin web platform using Next.js (React), handling ~70% of all core features including event management, rewards creation, and user messaging.
- Collaborated cross-functionally with backend (Spring Boot/PostgreSQL) and mobile (Swift) developers, contributed to API discussions, and flagged key logic issues impacting admin workflows.
- Refined UI/UX flows based on evolving business needs, iterated on Figma designs, and guided a new intern while delivering a fully functional prototype in under 2 weeks to enable handoff for pre-launch testing.

Application Developer Intern | IST Networks | Cairo, Egypt

Jun – Jul 2022

- Designed voice-based conversation flows using Microsoft Bot Framework, enabling users to access services like account balance checks by speaking naturally instead of navigating phone menus (built as part of a client pitch to several major Egyptian banks).
- Integrated sample bank APIs into simulated call flows and streamlined interaction logic, improving call speed by several seconds.
- Worked closely with NLP engineers and learned to test and debug REST APIs using Postman.

ACADEMIC PROGRAMMES

AI & Robotics Summer School | Huazhong University of Science and Technology | China

Jun 2024

- Attended daily lectures on AI and robotics research, covering topics such as swarm intelligence, healthcare robotics, and real-world applications in autonomous vehicles and exoskeletons.
- Led a team of 20 students in an AI-focused project on neonatal data pre-processing (feature extraction, one-hot encoding, noise reduction), and delivered the final presentation to 90 students and 5 professors – earning top marks in the Q&A session.
- Visited leading robotics and manufacturing facilities (e.g., VOYAH, HGTech), observing how industrial robots are applied in automotive assembly lines and medical tech production.

FEATURED PROJECTS

Nationwide Medical Device Replacement System | Freelance Project | Next.js, Supabase, SQL

Jul 2025

- Built and deployed a web-based device replacement system using Next.js and Supabase, streamlining the replacement process for Bluetooth glucose monitors across pharmacies in Kuwait.
- Designed a full workflow for patients, pharmacies, and administrators: patients submit a serial-verified complaint and receive a secure QR code; pharmacies scan and redeem it; company admins manage pharmacy accounts, track redemptions, and export national reports.
- Delivered as a solo developer and now in use by Kuwait’s largest pharmacy chain pharmacies dealing with 500+ diabetes patients; eliminating bottlenecks and saving hours per device issue, with planned expansion across dozens of locations.

Autonomous Air Traffic Control System | Thesis | Python, Reinforcement Learning, NLP, CV

Jan – Apr 2025

- Built a custom 2D simulation of Birmingham Airport using Python and Pygame to model realistic ground operations (inertia, taxiway networks via Dijkstra’s algorithm, holding-point rules) and provide visual debugging tools for AI agents.
- Trained and integrated deep Q-learning and multi-agent reinforcement learning frameworks (CTDE) to autonomously taxi aircraft with conflict resolution and prioritization, achieving collision-free routings under varied traffic scenarios.
- Augmented the platform with computer vision (OpenCV/YOLO) for runway-occupancy monitoring and a BERT-based NLP module for pilot-intent recognition, enabling real-time decision support on consumer-grade hardware.

- Developed a full-stack social feed feature using Angular, Spring Boot, and PostgreSQL, enabling users to upload, like, comment on, and report posts – including end-to-end implementation of image storage, custom entity relations, and cascading deletes where JHipster fell short.
- Maintained and documented the database schema and REST API structure for the entire project, ensuring consistent data handling and distribution across the 7-person team.
- Contributed to accessibility support and session persistence for user profile settings, and helped the team earn the second-highest score in the cohort following a video demo and technical report submission.

ADDITIONAL TECHNICAL PROJECTS

Rocket Landing Game with NEAT AI | Python, Pygame, NEAT
Built an AI to land rockets autonomously using evolutionary algorithms, with ongoing experiments in Q-learning and CNN-based decision-making.

Historical Data Storage Cost Calculator | React
Created an interactive tool that visualizes how data storage prices have changed from the 1950s to present, based on user-uploaded file sizes.

Automated Excel Transfer Tool | Python, Tkinter, openpyxl
Developed a GUI app to transfer and summarise accounting data across spreadsheets – reducing an 8-hour manual task to under 1 minute.

TECH SKILLS

Programming Languages:	Python, JavaScript, TypeScript, Java, C, SQL, HTML/CSS
Web Development:	React, Angular, Spring Boot, Node.js, REST APIs, JHipster
AI & Machine Learning:	PyTorch, scikit-learn, BERT, OpenCV, YOLO, Deep Q-Learning, Multi-Agent RL, NLP
Developer Tools:	Git, VS Code, IntelliJ, Jupyter, Postman, UML
Databases & Infra:	PostgreSQL, Supabase, AWS (basic), Vercel

AWARDS & ACHIEVEMENTS

School Prize for Best MEng Computer Science & Software Engineering Student
University of Birmingham, 2025

The Birmingham Award (with Distinction)
University of Birmingham Employability Recognition, 2025

UX/UI Design Finalist – Peppa.io Challenge
Design selected for product integration, 2024

Duke of Edinburgh’s International Award – Bronze & Silver
Jordan (Bronze) and Cyprus (Silver), 2017–2019

Gold & Bronze Medals – National Swimming Championships
Kuwait, 2019